What Is Claimed Is:

1. A compound having the Formula I:

$$R_7$$
 R_8
 R_1
 R_6
 R_5

Formula I

or a pharmaceutically acceptable salt or a prodrug thereof, wherein:

 R_1 is alkyl, haloalkyl, aminoalkyl, $C_{1\cdot 10}$ alkylaminoalkyl, di $(C_{1\cdot 10})$ alkylaminoalkyl, alkenyl, alkynyl, aralkyl, aralkenyl, aralkynyl, heteroaralkyl, carbocycloalkyl, heterocycloalkyl, hydroxyalkyl, cyanoalkyl, alkanoylamidoalkyl, alkanoyloxyalkyl, azidoalkyl, alkenyloxyalkyl, or alkoxyalkyl;

 R_6 and R_7 are taken together to form a five or six membered carbocyclic or heterocyclic ring;

R₅ and R₈ are independently selected from the group consisting of hydrogen, halogen, haloalkyl, aryl, heterocyclic, heteroaryl, alkyl, alkenyl, alkynyl, aralkyl, aralkynyl, hydroxyalkyl, nitro, amino, cyano, alkanoylamido, hydroxy, thiol, alkanoyloxy, alkoxy, carboxy, carbonylamido and thioalkoxy;

X is O or S; and

Y is optionally substituted aryl or optionally substituted heteroaryl; with the proviso that

when R₆ and R₇ are taken together as -OCH₂O-, then Y is not 2-thienyl, unsubstituted phenyl or a phenyl group that is substituted with a non-fused substituent;

10

5

15

when R_6 and R_7 are taken together as -OCH₂O- and Y is 3,4-methylenedioxyphenyl, R_1 is not C_{1-5} alkyl, C_{3-6} cycloalkyl, or C_{3-6} cycloalkyl- C_{1-3} alkyl; or

when R_6 and R_7 are taken together as $-OCH_2CH_2O$ -, then Y is not unsubstituted phenyl or a phenyl group that is substituted with a non-fused substituent.

5

10

15

20

25

- 2. A compound according to claim 1, wherein X is O, and Y is a substituted or unsubstituted heteroaryl group.
- 3. A compound according to claim 1, wherein R_6 and R_7 taken together are -OCH₂O-, -OCH₂CH₂O-, -O-CF₂-O-, -CH₂CH₂CH₂-, -CH₂CH₂CH₂-, or -N(R_9)-CO-O-; wherein R_9 is optionally substituted lower alkyl.
- 4. A compound according to claim 1, said compound is 1-isopropyl-6,7-methylenedioxy-4-(3-quinolinyl)quinazolin-2(1H)-one.
 - 5. A compound according to claim 1, wherein

Y is
$$R_3$$

R₂ is H, alkyl, halo, amino, alkoxy, and nitro; and

R₃ and R₄ are taken together to form a five or six membered carbocyclic or heterocyclic ring.

Ţ

with a proviso that when both R_6 and R_7 and R_3 and R_4 are taken together as -OCH₂O-, then R_1 is not $C_{1.5}$ alkyl, $C_{3.6}$ cycloalkyl, or $C_{3.6}$ cycloalkyl- $C_{1.3}$ alkyl.

5

6. A compound according to claim 5, wherein R₃ and R₄ taken together are -OCH₂O-, -OCH₂CH₂O-, -O-CF₂-O-, -CH₂CH₂CH₂-, -CH₂CH₂CH₂-, O-CH₂-CH₂-, -N=CH-O-, -NH-CO-O-, -CH=CH-CH=CH-, or -O-CH=CH-.

10

7. A compound according to claim 1, wherein said compound is selected from the group consisting of:

1-ethyl-6,7-methylenedioxy-4-(2-naphthyl)quinazolin-2(1H)-one,

1-isopropyl-6.7-methylenedioxy-4-(2-naphthyl)quinazolin-2(1H)-one,

1-cyclopropylmethyl-6,7-methylenedioxy-4-(3,4-methylenedioxy-phenyl)quinazolin-2(1*H*)-one,

15

1-(2-diethylaminoethyl)-6,7-methylenedioxy-4-(3,4-methylenedioxy-phenyl)quinazolin-2(1H)-one,

1-(2-propynyl)-6,7-methylenedioxy-4-(3,4-methylenedioxy-phenyl)quinazolin-2(1*H*)-one,

20

1-isopropyl-6,7-(difluoromethylenedioxy)-4-(3,4-methylenedioxyphenyl)quinazolin-2(1*H*)-one,

1-isopropyl-6,7-methylenedioxy-4-(2,3-dihydro-5-benzopuranyl)-quinazolin-2(1*H*)-one,

.25

1-isopropyl-6,7-methylenedioxy-4-(6-chloro-3,4-methylenedioxy-phenyl)quinazolin-2(1*H*)-one,

l-isopropyl-6,7-methylenedioxy-4-(5-indanyl)quinazolin-2(1H)-one,

1-(2-morpholinoethyl)-6,7-methylenedioxy-4-(3,4-methylenedioxy-phenyl)quinazolin-2(1H)-one,

 $\label{lem:lemediacy-4-(3,4-diffuoromethylenediacy-phenyl)} 1-isopropyl-6,7-methylenediacy-4-(3,4-diffuoromethylenediacy-phenyl)quinazolin-2(1H)-one,$

1-(1-methyl-2-dimethylaminoethyl)-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)quinazolin-2(1*H*)-one,

1-isopropyl-6,7-methylenedioxy-4-(3-quinolinyl)quinazolin-2(1*H*)-one,

1-(2-aminoethyl)-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)-quinazolin-2(1*H*)-one,

l-isopropyl-6,7-methylenedioxy-4-(5-benzoxazolyl)quinazolin-2(1H)-one, and

1-(2-pyrrolidinoethyl)-6,7-methylenedioxy-4-(3,4-methylenedioxy-phenyl)quinazolin-2(1*H*)-one.

8. A compound according to claim 5, wherein said compound is selected from the group consisting of:

1-(2-dimethylaminoethyl)-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)quinazolin-2(1*H*)-one, and

5

10

15

20

25

1-(2-dimethylaminoethyl)-6,7-methylenedioxy-4-(3,4-ethylenedioxy-phenyl)quinazolin-2(1*H*)-one.

9. A compound having the Formula II:

 R_7 R_8 N $O)_nR_1$ R_6 R_5

Formula II

or a pharmaceutically acceptable salt or prodrug thereof, wherein:

 R_1 is alkyl, haloalkyl, aminoalkyl, C_{1-10} alkylaminoalkyl, di (C_{1-10}) alkylaminoalkyl, alkynyl, aralkyl, aralkynyl, aralkyl, aralkynyl,

heteroaralkyl, carbocycloalkyl, heterocycloalkyl, hydroxyalkyl, cyanoalkyl, alkanoylamidoalkyl, alkanoyloxyalkyl, azidoalkyl, alkenyloxyalkyl, or alkoxyalkyl;

R₆ and R₇ are taken together to form a five or six membered carbocyclic or heterocyclic ring;

R₅ and R₈ are independently selected from the group consisting of hydrogen, halogen, haloalkyl, aryl, heterocyclic, heteroaryl, alkyl, alkenyl, alkynyl, aralkyl, aralkynyl, hydroxyalkyl, nitro, amino, cyano, alkanoylamido, hydroxy, thiol, alkanoyloxy, alkoxy, carboxy, carbonylamido and thioalkoxy;

n is 0 or 1;

Y is optionally substituted aryl or optionally substituted heteroaryl; and z is 0 or 1;

with the proviso that when R_6 and R_7 are taken together as -OCH₂O-, R_1 is alkyl and z is 0, then Y is not 3-indazolyl.

- 10. The compound according to claim 9, wherein R_6 and R_7 taken together are $-OCH_2O$ -, $-OCH_2CH_2O$ -, $-O-CF_2$ -O-, $-CH_2CH_2CH_2$ -, $-CH_2CH_2CH_2$ or $-N(R_9)$ -CO-O-; wherein R_9 is optionally substituted lower alkyl.
 - 11. A compound according to claim 9, wherein, n is 1; z is 0 or 1;

Y is
$$R_4$$

R₂ is H, alkyl, halo, amino, alkoxy, or nitro; and

25

5

10

15

R₃ and R₄ are taken together to form a five or six membered carbocyclic or heterocyclic ring.

- 12. The compound according to claim 11, wherein R₃ and R₄ taken together are -OCH₂O-, -OCH₂CH₂O-, -O-CF₂-O-, -CH₂CH₂CH₂-, -CH₂CH₂CH₂-, -O-CH₂-CH₂-, -N=CH-O-, -NH-CO-O-, -CH=CH-CH=CH-, or -O-CH=CH-.
- 13. A compound according to claim 9, wherein said compound is selected from the group consisting of:
- 2-(2-diethylaminoethoxy)-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)quinazoline,
- 2-(2-dimethylaminoethoxy)-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)quinazoline,
- 2-(2-dimethylaminoethoxy)-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)quinazoline,
- 2-(2-aminoethoxy)-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)quinazoline, and
- 2-(2-pyrrolidinoethoxy)-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)quinazoline.
 - 14. A compound according to claim 9, wherein n is 0; z is 0;

Y is
$$R_4$$

25

5

10

15

 R_3 and R_4 are taken together to form -OCH₂O-, -OCH₂CH₂O-, -O-CF₂-O-, -CH₂CH₂CH₂-, -CH₂CH₂CH₂-, -O-CH₂-CH₂-, -N=CH-O-, -NH-CO-O-, -CH=CH-CH=CH-, or -O-CH=CH-.

5

15. A compound according to claim 14, wherein said compound is selected from the group consisting of:

2-methyl-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)-quinazoline,

10

2-(1-hydroxy-1-methyl)ethyl-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)quinazoline,

6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)quinazoline,

2-ethyl-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)-quinazoline,

15

2-benzyl-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)-quinazoline,

2-dimethylamino-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)-quinazoline,

2-(2-diethylaminoethyl)-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)quinazoline,

20

25

2-(2-chloroethyl)-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)-quinazoline.

2-(2-dimethylaminomethyl)-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)quinazoline,

2-chloromethyl-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)-quinazoline,

quinazonne,

2-(2-dimethylamino-1-methylethoxy)-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)quinazoline,

2-(3-chloropropyl)-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)quinazoline,

2-(3-aminopropyl)-6,7-methylenedioxy-4-(3,4methylenedioxyphenyl)quinazoline, 2-n-pentyl-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)quinazoline, 2-(imidazol-1-yl)methyl-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)quinazoline, 6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)-2-(1,2,4-triazol-1yl)methyl-quinazoline, 2-((1-methyl-2-imidazolyl)thio)methyl-6,7-methylenedioxy-4-(3,4methylenedioxyphenyl)quinazoline, 2-(imidazol-1-yl)ethyl-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)quinazoline, 2-iodomethyl-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl) quinazoline, 2-acetoxymethyl-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl) quinazoline, 2-(2-morpholinoethyl)-6,7-methylenedioxy-4-(3,4methylenedioxyphenyl)quinazoline, and

2-piperazinomethyl-6,7-methylenedioxy-4-(3,4-methylenedioxy-

25.

5

10

15

20

phenyl)quinazoline.

16. A compound according to claim 9, wherein n is 0; z is 1;

Y is
$$R_2$$

5

R₂ is H, alkyl, halo, amino, alkoxy, or nitro; and

 R_3 and R_4 are taken together to form -OCH₂O-, -OCH₂CH₂O-, -O-CF₂-O-, -CH₂CH₂CH₂-, -CH₂CH₂CH₂CH₂-, -O-CH₂-CH₂-, -N=CH-O-, -NH-CO-O-, -CH=CH-CH=CH-, or -O-CH=CH-.

10

15

17. A compound according to claim 16, wherein said compound is selected from the group consisting of:

6,7-Methylenedioxy-4-(3,4-methylenedioxyphenyl)quinazoline 3-oxide,

2-Chloromethyl-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)-quinazoline 3-oxide,

2-Ethyl-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)quinazoline 3-oxide,

2-Methyl-6,7-methylenedioxy-4-(3,4-methylenedioxyphenyl)-quinazoline 3-oxide.

20

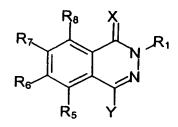
2-(1-Imidazolyl)methyl-6,7-methylenedioxy-4-(3,4-methylenedioxy-phenyl)quinazoline 3-oxide,

6,7-Methylenedioxy-4-(3,4-methylenedioxyphenyl)-2-(1-pyrrolidinyl)-methyl-quinazoline 3-oxide,

2-Dimethylaminomethyl-4-(3,4-methylenedioxyphenyl)-6,7-methylenedioxyquinazoline-3-oxide, and

2-Methylaminomethyl-4-(3,4-methylenedioxyphenyl)-6,7-methylenedioxyquinazoline 3-oxide.

18. A compound having the Formula III:



Formula III

or a pharmaceutically acceptable salt or prodrug thereof, wherein:

 R_1 is alkyl, haloalkyl, aminoalkyl, C_{1-10} alkylaminoalkyl, di (C_{1-10}) alkylaminoalkyl, alkenyl, alkynyl, aralkyl, aralkenyl, aralkynyl, heteroaralkyl, carbocycloalkyl, heterocycloalkyl, hydroxyalkyl, cyanoalkyl, alkanoylamidoalkyl, alkanoyloxyalkyl, azidoalkyl, alkenyloxyalkyl, or alkoxyalkyl;

 R_6 and R_7 are taken together to form a five or six membered carbocyclic or heterocyclic ring;

 R_5 and R_8 are independently selected from the group consisting of hydrogen, halogen, haloalkyl, aryl, heterocyclic, heteroaryl, alkyl, alkenyl, alkynyl, aralkyl, aralkynyl, hydroxyalkyl, nitro, amino, cyano, alkanoylamido, hydroxy, thiol, alkanoyloxy, alkoxy, carboxy, carbonylamido and thioalkoxy;

X is O or S: and

Y is optionally substituted aryl or optionally substituted heteroaryl.

19. The compound of claim 18, wherein R₆ and R₇ taken together are -OCH₂O-, -OCH₂CH₂O-, -O-CF₂-O-, -CH₂CH₂CH₂-,

5

10

15

20

-CH₂CH₂CH₂CH₂-, -OCH₂CH₂-, or -N(R₉)-CO-O-; wherein R₉ is optionally substituted lower alkyl.

20. A compound according to claim 18, wherein:

5

10

15

20

25

Y is
$$R_4$$

12.

R₂ is H, alkyl. halo, amino, alkoxy, or nitro; and

 $R_{\scriptscriptstyle 3}$ and $R_{\scriptscriptstyle 4}$ are taken together to form a five or six membered carbocyclic or heterocyclic ring.

- 21. The compound according to claim 20, wherein R_3 and R_4 taken together are -OCH₂O-, -OCH₂CH₂O-, -O-CF₂-O-, -CH₂CH₂CH₂-. -CH₂CH₂CH₂-. -N=CH-O-, -N+CO-O-, -CH=CH-CH=CH-, or -O-CH=CH-.
- 22. A compound according to claim 18, wherein said compound is selected from the group consisting of:

2-[2-(Dimethylamino)ethyl]-4-(3,4-methylenedioxyphenyl)-6,7-methylenedioxy-1(2H)-phthalazinone,

2-Ethyl-4-(3,4-methylenedioxyphenyl)-6,7-methylenedioxy-1(2H)-phthalazinone,

2-[2-(1-Imidazolyl)ethyl]-4-(3,4-methylenedioxyphenyl)-6,7-methylenedioxy-1(2H)-phthalazinone,

4-(3,4-Methylenedioxyphenyl)-6,7-methylenedioxy-1(2H)-phthalazinone,

2-[2-(1-Piperidinyl)ethyl]-4-(3,4-methylenedioxyphenyl)-6,7-methylenedioxy-1(2H)-phthalazinone,

2[2-(1-Pyrrolidinyl)ethyl]-4-(3,4-methylenedioxyphenyl)-6,7-methylenedioxy-1(2H)-phthalazinone, and

5

10

15

20

2-[2-(Ethoxycarbonyl)ethyl]-4-(3,4-methylenedioxyphenyl)-6,7-methylenedioxy-1(2H)-phthalazinone.

- 23. A pharmaceutical composition comprising the compound of any one of claims 1, 9 and 18 and a pharmaceutically acceptable carrier.
- 24. A method of treating, preventing or ameliorating neuronal loss associated with stroke, ischemia, CNS trauma, hypoglycemia or surgery; or treating or ameliorating a neurodegenerative disease selected from the group consisting of Alzheimer's disease, amyotrophic lateral sclerosis, Huntington's disease, Parkinson's disease and Down's syndrome; or treating, preventing or ameliorating the adverse consequences of the overstimulation of the excitatory amino acids; or treating, preventing or ameliorating anxiety, psychosis, convulsions, acute or chronic pain, migraine headache, glaucoma, retinitis, urinary incontinence or inducing anesthesia; or enhancing learning and cognition; or treating or ameliorating schizophrenia and myoclonus; comprising administering to an animal in need of such treatment an effective amount of a compound of any one of claims 1, 9 and 18.

25. The method of claim 24, wherein:

Y is
$$R_2$$

R2 is H, alkyl, halo, amino, alkoxy, or nitro; and

5

10

15

20

 R_3 and R_4 are taken together to form -OCH₂O-, -OCH₂CH₂O-, -O-CF₂-O-, -CH₂CH₂CH₂-, -CH₂CH₂CH₂-, -O-CH₂-CH₂-, -N=CH-O-, -NH-CO-O-, -CH=CH-CH=CH-, or -O-CH=CH-.

- 26. The method according to claim 24, wherein said method is for treating, preventing or ameliorating global ischemia.
- 27. The method of claim 26, wherein said global ischemia is the result of cardiac arrest.
- 28. The method according to claim 24, wherein said method is for treating or ameliorating amyotrophic lateral sclerosis.
- 29. The method according to claim 24, wherein said method is for treating or ameliorating acute or chronic pain.
- 30. A method of treating, preventing or ameliorating schizophrenia, comprising administering to an animal in need thereof an effective amount of a compound of any one of claims 1, 9 and 18.

31. The method of claim 30, wherein:

Y is
$$R_4$$

5

R2 is H, alkyl, halo, amino, alkoxy, or nitro; and

 R_3 and R_4 are taken together to OCH₂O-, -OCH₂CH₂O-, -O-CF₂-O-, -CH₂CH₂CH₂-, -CH₂CH₂CH₂CH₂-, -O-CH₂-CH₂-, -N=CH-O-, -NH-CO-O-, -CH=CH-CH=CH-, or -O-CH=CH-.

10

15

32. A method of treating, preventing or ameliorating neuronal loss associated with stroke, ischemia, CNS trauma, hypoglycemia or surgery; or treating or ameliorating a neurodegenerative disease selected from the group consisting of Alzheimer's disease, amyotrophic lateral sclerosis, Huntington's disease, Parkinson's disease and Down's syndrome; or treating, preventing or ameliorating the adverse consequences of the overstimulation of the excitatory amino acids; or treating, preventing or ameliorating anxiety, psychosis, convulsions, chronic pain, migraine headache, glaucoma, retinitis, urinary incontinence or inducing anesthesia; or enhancing learning and cognition; or treating or ameliorating schizophrenia and myoclonus; comprising administering to an animal in need of such treatment an effective amount of a compound of the Formula I:

$$R_7$$
 R_8
 R_1
 R_7
 R_6
 R_5

Formula I

or a pharmaceutically acceptable salt or a prodrug thereof, wherein:

 R_i is alkyl, haloalkyl, aminoalkyl, $C_{i\cdot i0}$ alkylaminoalkyl, di $(C_{i\cdot i0})$ alkylaminoalkyl, alkenyl, aralkynyl, aralkyl, aralkenyl, aralkynyl, heteroaralkyl, carbocycloalkyl, heterocycloalkyl, hydroxyalkyl, cyanoalkyl, alkanoylamidoalkyl, alkanoyloxyalkyl, azidoalkyl, alkenyloxyalkyl, or alkoxyalkyl;

 R_6 and R_7 are taken together to form a five or six membered carbocyclic or heterocyclic ring;

R₅ and R₈ are independently selected from the group consisting of hydrogen, halogen, haloalkyl, aryl, heterocyclic, heteroaryl, alkyl, alkenyl, alkynyl, aralkyl, aralkynyl, hydroxyalkyl, nitro, amino, cyano, alkanoylamido, hydroxy, thiol, alkanoyloxy, alkoxy, carboxy, carbonylamido and thioalkoxy;

X is O or S; and

Y is optionally substituted aryl or optionally substituted heteroaryl.

10

5

33. A method of treating, preventing or ameliorating neuronal loss associated with stroke, ischemia, CNS trauma, hypoglycemia or surgery; or treating or ameliorating a neurodegenerative disease selected from the group consisting of Alzheimer's disease, amyotrophic lateral sclerosis, Huntington's disease, Parkinson's disease and Down's syndrome; or treating, preventing or ameliorating the adverse consequences of the overstimulation of the excitatory amino acids; or treating, preventing or ameliorating anxiety, psychosis, convulsions, chronic pain, migraine headache, glaucoma, retinitis, urinary incontinence or inducing anesthesia; or enhancing learning and cognition; or treating or ameliorating schizophrenia and myoclonus; comprising administering to an animal in need of such treatment an effective amount of a compound having the Formula II:

$$R_7$$
 R_8
 R_7
 R_6
 R_5
 R_7
 R_8
 R_7
 R_8
 R_9
 R_9

Formula II

15

20

25

5

10

or a pharmaceutically acceptable salt or prodrug thereof, wherein:

 R_1 is alkyl, haloalkyl, aminoalkyl, C_{1-10} alkylaminoalkyl, di (C_{1-10}) alkylaminoalkyl, alkenyl, aralkynyl, aralkyl, aralkynyl, heteroaralkyl, carbocycloalkyl, heterocycloalkyl, hydroxyalkyl, cyanoalkyl, alkanoylamidoalkyl, alkanoyloxyalkyl, azidoalkyl, alkenyloxyalkyl, or alkoxyalkyl;

 R_6 and R_7 are taken together to form a five or six membered carbocyclic or heterocyclic ring;

R₅ and R₈ are independently selected from the group consisting of hydrogen, halogen, haloalkyl, aryl, heterocyclic, heteroaryl, alkyl, alkenyl,

alkynyl, aralkyl, aralkynyl, hydroxyalkyl, nitro, amino, cyano, alkanoylamido, hydroxy, thiol, alkanoyloxy, alkoxy, carboxy, carbonylamido and thioalkoxy;

n is 0 or 1;

Y is optionally substituted aryl or optionally substituted heteroaryl; and

z is 0 or 1.

10